

**WHAT IS CLAIMED IS:**

1. A cored wire injection process for introducing fluxes and alloying additives in liquid steel bath, comprising the steps of:
  - adjusting the bath temperature and chemistry of the liquid steel in a secondary treatment unit according to requirements; and
  - releasing said additives from said cored wire, while controlling the zone of release of said additives thereby controlling yield of the additives by changing the dimensions of said cored wire and speed of injection to suit the grade of steel processed and the treatment temperature.
2. The process as claimed in claim 1, wherein the zone of release of said flux and other additives from said cored wire is preferably very close to the bottom of the ladle of said secondary treatment unit.
3. The process as claimed in any of the preceding claims, wherein the dimensions of said cored wire for steel grades of high liquidus temperature and / or treatment temperature in a 140 ton ladle with 3 meter bath depth, are preferably more than 13 mm in diameter and more than 0.4 mm in thickness to suit the treatment temperature and the grade of steel.
4. The process as claimed in claim 3, wherein the dimensions of said cored wire are 16 mm in diameter and 0.6 mm in thickness.
5. The process as claimed in claim 3, wherein the dimensions of said cored wire are 18 mm in diameter and 0.8mm in thickness.

6. The process as claimed in the preceding claim, wherein said speed of injection is preferably about 110 meters / min.
7. The process as claimed in claim 1, wherein said additive is a calcium bearing material.
8. The process as claimed in claim 7, wherein said calcium bearing material comprises calcium-silicide.
9. The process as claimed in claim 7, wherein said calcium bearing material comprises calcium-iron.

**AMENDED CLAIMS**

[received by the International Bureau on 29 July 2005 (29.07.05);  
original claims 1-9 replaced by amended claims 1-9 (2 pages)]

**WHAT IS CLAIMED IS:**

1. A cored wire injection process for introducing fluxes and alloying additives in liquid steel bath after adjusting bath temperature and the chemistry of liquid steel in a secondary treatment unit according to requirements;  
characterized in that  
said additives are released close to the bottom of the ladle by injecting at a predetermined speed a prefabricated cored wire of appropriate dimensions, depending on the grade of liquid steel, treatment temperature and ladle size/liquid column height.
2. The process as claimed in claim 1, wherein said predetermined speed of injection is preferably 110 m/min.
3. The process as claimed in claim 1, wherein dimensions of said cored wire are preferably more than 13 mm in diameter and more than 0.4 mm in sheath thickness to suit steel grades of high liquidus temperature and/or treatment temperature in a 140 ton ladle with 3 m liquid column height.
4. The process as claimed in claim 3, wherein the dimensions of said cored wire are 16 mm in diameter and 0.6 mm in sheath thickness and the speed of injection is 60-80 m/min.
5. The process as claimed in claim 3, wherein the dimensions of said cored wire are 18 mm in diameter and 0.8 mm in sheath thickness and the speed of injection is 100-120 m/min.

6. The process as claimed in claim 1, wherein said additive is a ferro-alloy material.
7. The process as claimed in claim 1, wherein said additive is a calcium bearing material.
8. The process as claimed in claim 7, wherein said calcium bearing material comprises calcium-silicide.
9. The process as claimed in claim 7, wherein said calcium bearing material comprises calcium iron.